

# **EXHIBIT 6**

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MUELLER SYSTEMS, LLC,

Petitioner

v.

REIN TECH, INC.,

Patent Owner

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Case IPR2020-00100  
U.S. Patent No. 9,749,792

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**PETITION FOR *INTER PARTES* REVIEW  
OF U.S. PATENT NO. 9,749,792**

**Mail Stop PATENT BOARD**  
Patent Trial and Appeal Board  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Petition for *Inter Partes* Review  
U.S. Patent No. 9,749,792

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**EXHIBITS CITED**

<b>Exhibit No.</b>	<b>DESCRIPTION</b>
1001	U.S. Patent No. 9,749,792 (“the ’792 Patent”) to Klicpera
1002	Prosecution History of the ’792 Patent (Appl. No. 14/596,460) – Part 1 of 2
1003	<i>Ex Parte</i> Reexamination History of the ’792 Patent, as of the date of filing this Petition (Appl. No. 90/014,355)
1004	U.S. Patent No. 9,019,120 to Broniak (“ <i>Broniak</i> ”)
1005	U.S. Publ. No. 2004/0193329 to Ransom (“ <i>Ransom</i> ”)
1006	Pacific Gas and Electric Company, SmartMeter System—How It Works, archived web page from July 12, 2010, <i>available at</i> <a href="https://web.archive.org/web/20100712031615/https://www.pge.com/myhome/customerservice/smartmeter/howitworks/">https://web.archive.org/web/20100712031615/https://www.pge.com/myhome/customerservice/smartmeter/howitworks/</a> , last accessed Oct. 9, 2019
1007	Rein Tech’s Contact Webpage, <a href="https://www.reintechinc.com/contact.html">https://www.reintechinc.com/contact.html</a> , last accessed Sept. 24, 2019
1008	U.S. Patent Publ. No. 2009/0070682 to Dawes (“ <i>Dawes</i> ”)
1009	U.S. Patent No. 9,297,150 to Klicpera



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1010	U.S. Patent No. 9,061,307 to Klicpera
1011	New World Encyclopedia, Thermocouple, archived webpage from Dec. 28, 2008, <i>available at</i> <a href="https://web.archive.org/web/20081228234252/https://www.newworldencyclopedia.org/entry/Thermocouple">https://web.archive.org/web/20081228234252/https://www.newworldencyclopedia.org/entry/Thermocouple</a>
1012	Thermocouple Wire Report, webpage last updated on Apr. 8, 2004, <i>available at</i> <a href="http://www.lieda.co.za/Wordpress/wp-content/uploads/reports/ThermocoupleWireReport.pdf">http://www.lieda.co.za/Wordpress/wp-content/uploads/reports/ThermocoupleWireReport.pdf</a>
1013	Wikipedia, Pressure Sensor, archived webpage from Nov. 17, 2007, <i>available at</i> <a href="https://web.archive.org/web/20071117202257/https://en.wikipedia.org/wiki/Pressure_sensor">https://web.archive.org/web/20071117202257/https://en.wikipedia.org/wiki/Pressure_sensor</a>
1014	Wikipedia, Flow Measurement, archived webpage from Oct. 28, 2007, <i>available at</i> <a href="https://web.archive.org/web/20071028063648/https://en.wikipedia.org/wiki/Flow_measurement">https://web.archive.org/web/20071028063648/https://en.wikipedia.org/wiki/Flow_measurement</a>
1015	U.S. Patent Publ. No. 2011/0035063 to Palayur (“ <i>Palayur</i> ”)
1016	U.S. Patent No. 9,494,480 to Klicpera
1017	U.S. Provisional Appl. No. 62/095,024 to Klicpera
1018	The Free Dictionary, Remotely, archived webpage from Aug. 21,

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	2008, <i>available at</i> <a href="https://web.archive.org/web/20080821060942/http://www.thefreedictionary.com/remotely">https://web.archive.org/web/20080821060942/http://www.thefreedictionary.com/remotely</a>
1019	Declaration of Vijay Madisetti, Ph.D (“Madisetti”)
1020	Prosecution History of the ’792 Patent (Appl. No. 14/596,460) – Part 2 of 2

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## I. INTRODUCTION

Petitioner Mueller Systems, LLC (“Petitioner” or “Mueller”) requests *inter partes* review and cancellation of claims 1-5, 12, 14, 17, 19, 22, 23, and 27 of U.S. Patent No. 9,749,792 (“the ’792 patent,” Ex. 1001). The challenged claims are directed to a water use monitoring and leak detection apparatus that allows users to access water flow data using a cell phone or other mobile device. This purported invention is nothing more than an obvious use of standard equipment operating in conventional ways and communicating using existing networks.

Indeed, in the application for the ’792 patent, the inventor described the well-known feature of transmitting data from water meters to remote computers so that users can remotely monitor their water usage and access their data on the Internet using a cell phone. This feature is clearly disclosed in a prior art reference *Broniak*, which was never considered by the Examiner during prosecution.

The inventor then simply copied other known features from the prior art and claimed them as features of the purported invention. Specifically, the patent owner and inventor have admitted that columns and columns of detailed disclosure concerning data security mechanisms, such as authentication, encryption, and integrity techniques, were “copied and plagiarized” from a prior art reference, *Ransom*. In addition, all the written description in the ’792 patent specification relating to RF mesh technology, including “mesh-enabled” devices and “access

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points,” was copied from a prior art Pacific Gas and Electric Company webpage (“*PG&E*”) describing *PG&E*’s existing “SmartMeter” system.

During prosecution, the Examiner allowed the claims of the ’792 patent because the mesh-enabled and access point features were believed to distinguish the claims from the prior art. Had the Examiner known that these features were copied from *PG&E*, however, the ’792 patent would never have issued. As shown below, the challenged claims are obvious over *Broniak* in view of *Ransom* and/or *PG&E*.

Lest there be any doubt, the inventor recently filed a request for *ex parte* reexamination on behalf of the patent owner admitting that all claims in the ’792 patent are invalid for obviousness. The patent owner also proposed substantive amendments to challenged independent claims 1 and 2, as well as numerous dependent claims. That proceeding has been instituted and should constitute a concession that all challenged claims of the ’792 patent are unpatentable.

Accordingly, the challenged claims of the ’792 patent were obvious and should be cancelled.

## **II. MANDATORY NOTICES**

### **A. Real Party in Interest**

In accordance with 37 C.F.R. § 42.8(b)(1), Mueller identifies Mueller Systems, LLC, and its parent company, Mueller Water Products, Inc., a public company, as the real parties in interest.

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**B. Related Matters**

In accordance with 37 C.F.R. § 42.8(b)(2), Mueller has been sued for allegedly infringing the '792 patent in *Rein Tech, Inc. v. Mueller Systems, LLC*, No. 1:18-cv-1683-MN (D. Del.). The case was filed on October 26, 2018, and remains pending. Patent Owner Rein Tech, Inc. ("Patent Owner" or "Rein Tech") is not currently asserting any claims of the '792 patent against Mueller, but it asserted several claims of the '792 patent against Mueller in its Complaint and has purported to reserve the right to later reassert such claims against Mueller.

The '792 patent was also involved in the following proceedings: *Rein Tech, Inc. v. Flo Technologies, Inc.*, No. 1:18-cv-1682-MN (D. Del.) and *Rein Tech, Inc. v. Xylem, Inc.*, No. 1:18-CV-1684-MN (D. Del.). Those proceedings concluded in January and March, 2019, respectively.

The '792 patent issued from U.S. Patent Application No. 14/596,460 (the "'460 application"). A copy of the file history of the '460 application is attached as Exhibits 1002 (Part 1) and 1020 (Part 2).

The '792 patent is the subject of a pending *ex parte* reexamination proceeding filed by Rein Tech: U.S. Serial No. 90/014,355. A copy of the reexamination file history for the '792 patent is attached as Exhibit 1003.

**C. Lead and Backup Counsel and Service Information**

In accordance with 37 C.F.R. § 42.8(b)(3)-(4), Mueller's identification of

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counsel and service information is provided below.

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Please address all correspondence and service to counsel designated above.

Mueller consents to service by email at cnixon@taylorenghish.com, tjones@taylorenghish.com, and strimble@taylorenghish.com.

**D. Power of Attorney and Fees**

Mueller is filing a power of attorney concurrently with this petition, as well as electronic payment of the fee specified by 37 C.F.R. § 42.15(a). If additional fees are due at any time throughout the course of these proceedings, the undersigned authorizes the U.S. Patent and Trademark Office to charge such fees to Deposit

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Account No. 50-5154.

### **III. GROUNDS FOR STANDING**

Pursuant to 37 C.F.R. § 42.104(a), Mueller certifies that the '792 patent is available for *inter partes* review and that Mueller is not barred or estopped from requesting this *inter partes* review on the grounds identified herein.

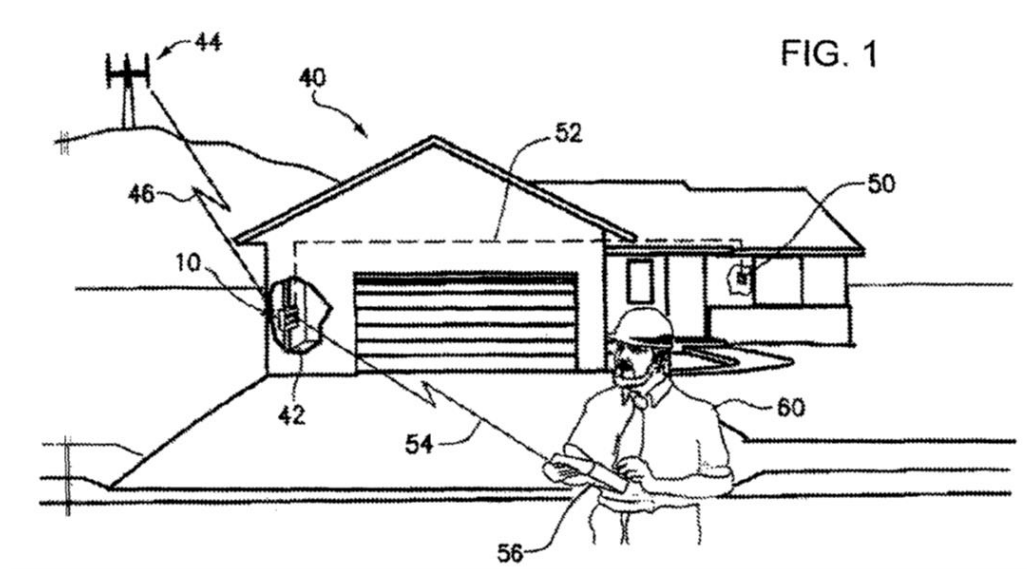
### **IV. THE '792 PATENT**

#### **A. Overview**

The '792 patent is directed to a water use monitoring and leak detection apparatus. (*E.g.*, Ex. 1001, claims 1 and 2.) The '792 patent discloses that “[t]he present invention comprises a water use and water energy use monitoring display apparatus having a base station attached to a water supply with wireless or wire capability to communicate with one or more remote display and for recording apparatus devices.” (*Id.*, 3:6-10.) Figure 1 depicts the base station 10 and three “communication means” 52, 54, and 46 for communicating water use information to various devices.

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**'792 Patent, Figure 1**



The '792 patent discloses that “a first wired or wireless communication means 52” is for communicating water use information to a display 50 “located in a convenient location for the commercial operator or occupier or residential individual.” (*Id.*, 7:37-44.) A second “wireless communication means 54” is for communicating water parameter data to an individual 60 using a second remote display 56, such as “a typical cell phone, smart phones [sic], or similar apparatus.” (*Id.*, 8:16-24.) And a third “wireless communication means 46” is for communicating data “under a cellular format technology with offsite central monitoring computer” or to a “programmed cell or phone number” for communicating data “to the owner or a municipal/governmental agency (such as announcing a water leak situation).” (*Id.*, 9:1-10.) According to the '792 patent, “[i]n real time, the identification of leaks can be brought to the attention of an owner or



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appropriate repair individual thereby offsetting costs of system implementation of the present invention by savings in water costs and benefits in water conservation.” (*Id.*, 59:23:27; Ex. 1019 (“Madisetti”) ¶¶27-28.)

The ’792 patent names Michael E. Klicpera as the sole inventor. (Ex. 1001.) According to USPTO records, the ’792 patent is assigned to Rein Tech. According to Rein Tech’s website, Rein Tech was founded by Klicpera, who is a registered patent attorney. (Ex. 1007.) The ’792 patent is part of a family of patents and patent applications, all filed and prosecuted by Klicpera, that generally relate to water conservation. (Ex. 1001.) For example, priority application Appl. No. 12/539,150 (now U.S. Patent No. 9,061,307), relates to an adjustable shower or bath head that “monitors water usage to encourage water savings.” (Ex. 1010, 2:13-16.)

**B. The Specification**

**1. The Purported Invention Uses Standard Equipment and Existing Communication Networks.**

The ’792 patent specification discloses that the claimed water use monitoring and leak detection apparatus is comprised of standard equipment that operates in conventional ways and communicates using existing networks. (Madisetti ¶30.) For example, the specification discloses that “the present invention water parameter use display and monitoring device” can be “incorporated into . . . [the] primary water meter at residential or commercial facilities.” (Ex. 1001, 19:39-43.)

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The specification discloses that the monitoring device is comprised of water pipe joint unions, a housing, and a display. (*Id.*, 19:43-49.) According to the specification, the “plurality of water pipe unions or joints 30, 32, 34 and 36 can be fabricated from *typical* metallic piping materials.” (*Id.*, 19:50-51).<sup>1</sup> Similarly, the “material for fabricating the housing 18 is not particularly important,” and can be any “metallic material.” (*Id.*, 20:43-46, 20:53-55.) The specification also discloses that existing LCD units, such as the “LCD-00569 marketed by Sparkfun Electronics,” “can be used with the present invention” as the display (*id.*, 21:36-39), and that existing microprocessors, such as the “MSP430 family of processors from Texas Instruments,” “could be utilized in the present invention” as the CPU. (*Id.*, 24:13-18.)

The specification discloses that the monitoring device may also include “water shut off means,” such as “a *typical* ball valve or solenoid shut off valve.” (*Id.*, 23:17-22.) In addition, the specification teaches that “there are several types of mechanical flow meters that can be utilized with the present invention as the flow sensor.” (*Id.*, 30:1-3.)

For communicating water use data, the specification discloses that “[t]he

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<sup>1</sup> In this Petition, all emphasis in the quotations has been added unless otherwise indicated.

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water parameter use and monitoring apparatus can use a *typical* cell phone, smart phones, or similar apparatus” (*id.*, 39:17-19) that “is using wireless, Bluetooth technology or other wireless technology.” (*Id.*, 17:67-18:2.) The specification explains that the “use of Bluetooth wireless technology” or “WIFI” “is *commonly a feature* found on many cells phones, smart phones and similar apparatus” (*id.*, 50:37-39, 50:49-52), and that the use of “cellular wireless technology” is “*a primary feature* of cells [sic] phones, smart phones and similar apparatus.” (*Id.*, 51:12-13.)

In particular, the specification discloses that the wireless communication means can be “incorporated into and/or cooperation [sic] with electric and gas smart meters communication/transmission mesh technology,” thereby “tak[ing] advantage of the communication/transmission mesh means already in place.” (*Id.*, 9:53-58.) *See also id.*, 54:20-25 (“In addition to *standard* HTTP or HTTPS communications, the modem and router/server 438 and remote computer/server service center 438 can support the use of a cellular network 436 (both GPRS, GSM and CDMA options are available) as another means to provide the primary broadband connection 438 to the internet 434.”)

**2. The Specification Includes Substantial Disclosure Copied from the Prior Art.**

In addition to describing the monitoring apparatus as using “typical,” existing components and taking advantage of communication networks “already in place,”

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the '792 patent specification describes details of the purported invention using columns and columns of detailed description that were simply copied from the prior art. (Madisetti ¶35.)

***a. Data Security Copied from Ransom***

For example, in the pending *ex parte* reexamination of the '792 patent, Klicpera admitted that sections of the written description relating to data security techniques were “copied and plagiarized” from a prior art reference, U.S. Publ. No. 2004/0193329 to Ransom (“*Ransom*”) (Ex. 1005). (Ex. 1003, 8.) Specifically, at least columns 13 through 16 of the '792 patent specification (Ex. 1001), starting at 13:3-5 (“There are various security techniques, including encryption, authentication, integrity and non-repudiation that provide secure communications.”) and continuing through 16:51-52 (discussing “unsigned code or code signed by a non-trusted entity”) were copied and only slightly modified from *Ransom* (Ex. 1005), including at least paragraphs [0116]-[0131], [0143], [0150]-[0151], [0153], [0162], [0164], [0166]-[0168], [0172]-[0174], [0191], and [0194].

***b. Mesh Networks Copied from PG&E’s SmartMeter Webpage***

Similarly, all the written description in the '792 patent specification relating to “mesh-enabled” devices such as “access points” was copied from *PG&E*, the prior art Pacific Gas and Electric Company webpage describing PG&E’s “SmartMeter”

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electric meter system. (Ex. 1006.) The '792 patent describes the prior art SmartMeter system in the "Background" section of the specification (Ex. 1001, 1:46-2:20), and includes copied disclosure from *PG&E* describing how, e.g., "[e]ach SmartMeter™ electric meter is equipped with a network radio, which transmits meter data to an electric network access point," and how the prior art system "uses RF mesh technology, which allows meters and other sensing devices to securely route data via nearby meters and relay devices, creating a 'mesh' of network coverage." (*Id.*, 1:62-67.) *See* Ex. 1006, 1-2 (containing the copied disclosure). The '792 patent then reproduces the copied disclosure from *PG&E* in the "Description of the Preferred Embodiments" section of the specification to describe the "RF mesh network" that can be used with the purported invention. (Ex. 1001, 9:40-52, 19:2-15, 43:36-60.)

***c. System Components, Software, and Applications Copied from Dawes***

Further still, the detailed disclosure at columns 54 through 59 of the '792 patent specification was copied and only slightly modified from U.S. Patent Publ. No. 2009/0070682 to Dawes ("*Dawes*") (Ex. 1008). *Compare* Ex. 1001, 54:40-59:6 with Ex. 1008, ¶¶ [0063], [0066]-[0067], [0073-0074], [0076], [0078], [0082], [0087], [0090], [0094]-[0096], [0102]-[0103], [0110]-[0111], and [0117]-[0122]. In this regard, Figures 10, 11, and 12 of the '792 patent were originally copied from Figures 1, 2, and 3 of *Dawes* and included, with only slight edits, in Klicpera's

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priority application, Serial No. 13/776,963, now U.S. Patent No. 9,297,150 (Ex. 1009), and in the application for the '792 patent as filed (Ex. 1002, 114-116). During prosecution of the '792 patent, Klicpera submitted replacement drawings for Figures 10-12 that included additional edits to the figures of *Dawes* (*id.*, 254-261), but the original source remains clear.

As shown below, Figure 10 of the '792 Patent was derived from Figure 1 of *Dawes*:

***Dawes* Prior Art (Ex. 1008), Figure 1**

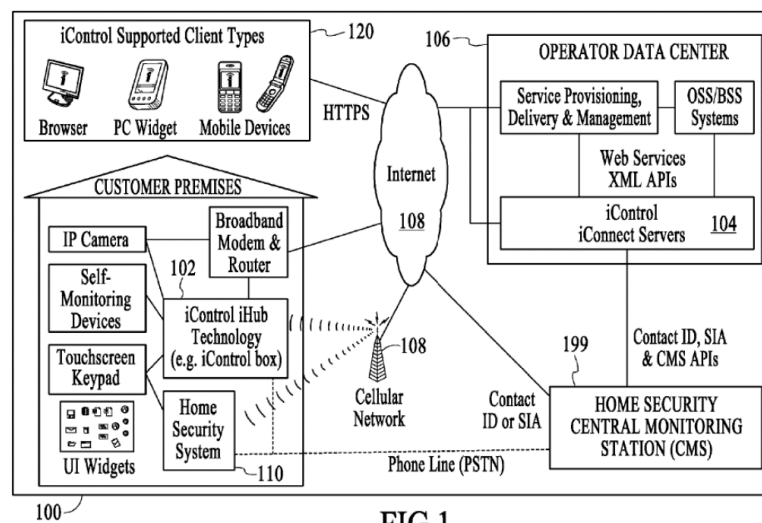
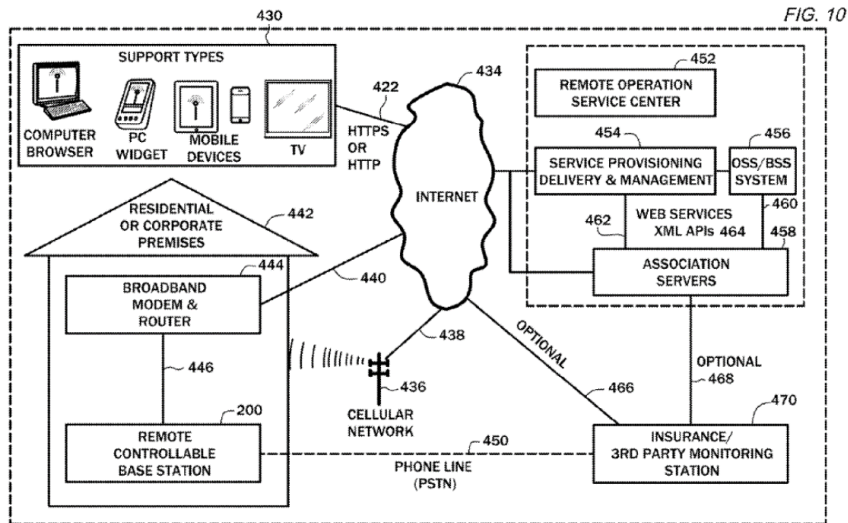


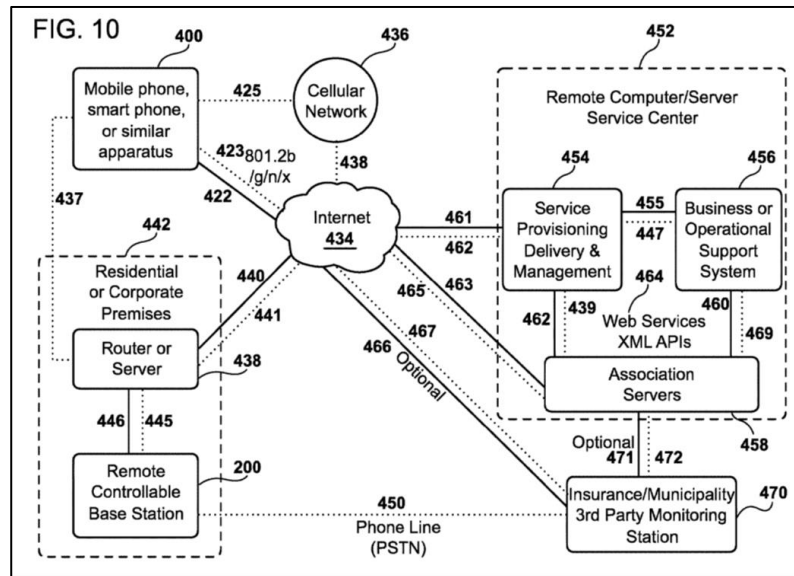
FIG.1

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'150 Patent (Ex. 1009), Figure 10



'792 Patent (Ex. 1001), Figure 10

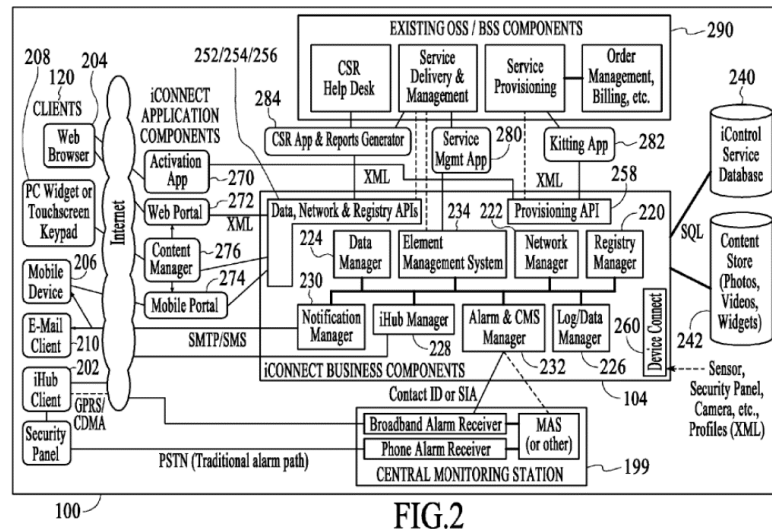


Similarly, Figure 11 of the '792 Patent was derived from Figure 2 of *Dawes*:

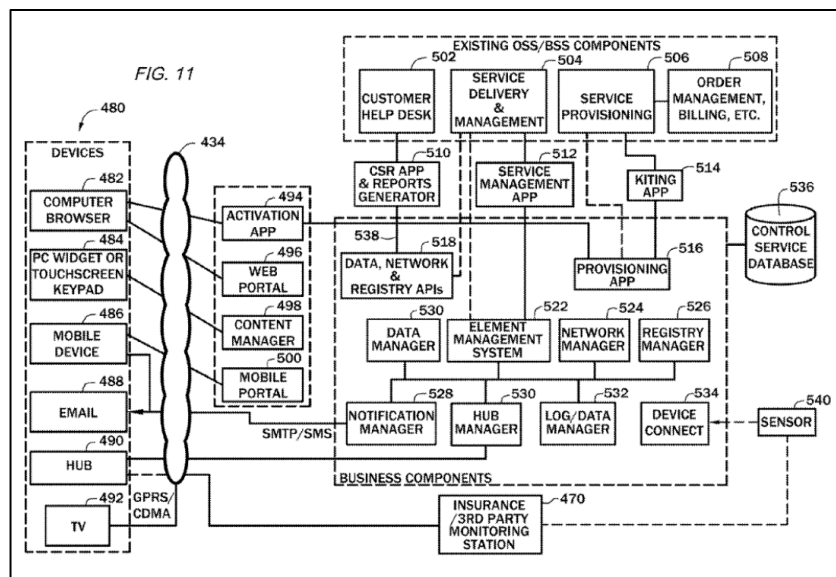


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**Dawes Prior Art (Ex. 1008), Figure 2**



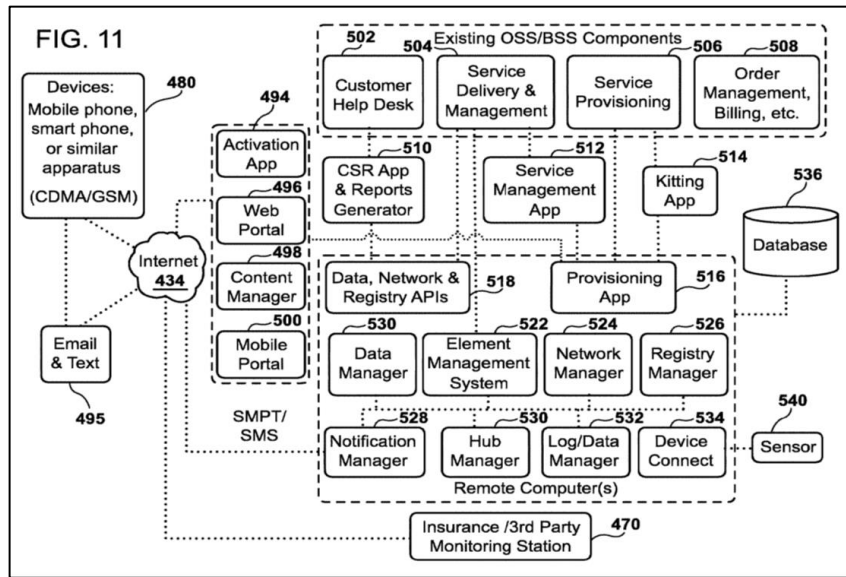
**'150 Patent (Ex. 1009), Figure 11**



**'792 Patent (Ex. 1001), Figure 11**

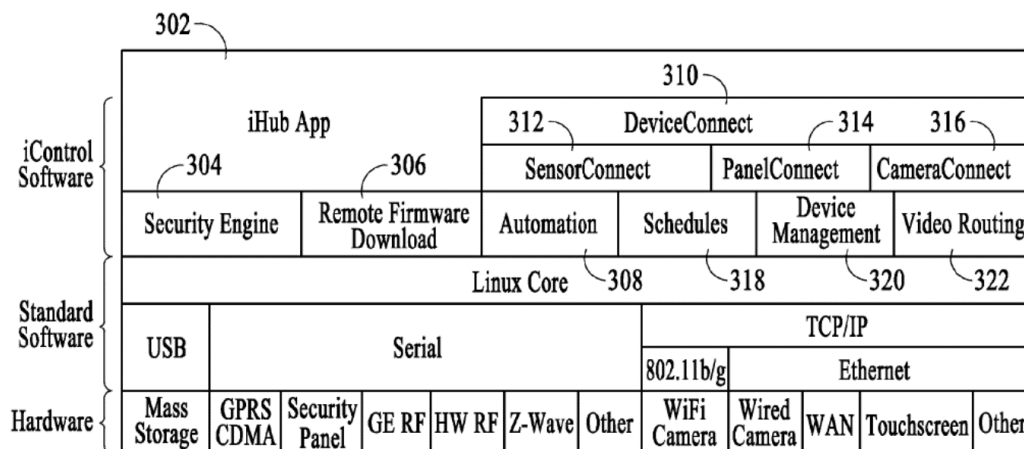


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And Figure 12 of the '792 Patent was derived from Figure 3 of *Dawes*:

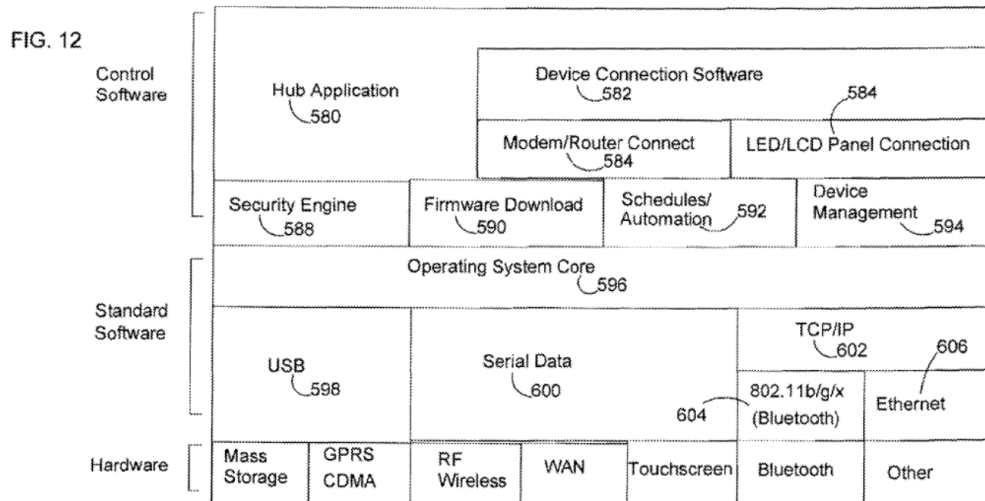
***Dawes* Prior Art (Ex. 1008), Figure 3**



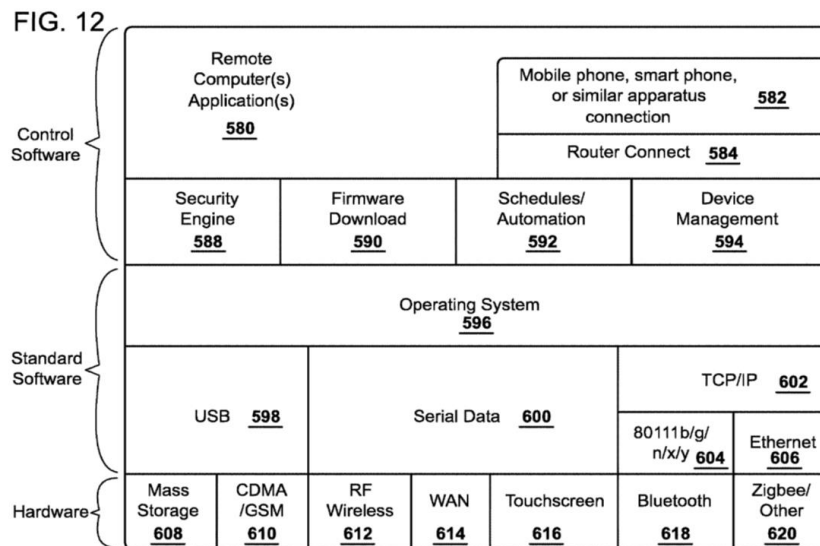
**FIG.3**

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**'150 Patent (Ex. 1009), Figure 12**



**'792 Patent (Ex. 1001), Figure 12**



*Dawes* generally relates to an “integrated security system” that “delivers remote premise monitoring and control functionality” and enables users to “control home devices via a personal web portal, mobile phone, or other client device.” (Ex.

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1008, Abstract.) Minor edits were made to figures and detailed description of *Dawes* to refer to components of a system for controlling a water use monitoring apparatus or base station, instead of a security system for controlling home devices. *Compare, e.g., Dawes*, Ex. 1008, ¶[0118] (“The Security Engine 304 provides robust protection against intentional and unintentional intrusion into the *integrated security system network* from the outside world (both from inside the premises as well as from the WAN).”) *with* the ’792 patent, Ex. 1001, 57:62-65 (“The Security Engine 588 provides robust protection against intentional and unintentional intrusion into the *integrated water use and water energy use monitoring display and remotely controllable base station* 200 (10, 126) both from inside the premises as well as from the WAN, LAN or Internet or outside premises.”).

In fact, the copying of *Dawes* was so pervasive that numerous references to the “integrated security system” of *Dawes* were left unchanged in the ’792 patent specification. *See, e.g.,* Ex. 1001, 55:33-35 (referring to components that “manage the main elements of the *integrated security system* service”); *see also id.*, 56:19, 56:50, 57:23.

***d. Additional Disclosure Copied From the Prior Art***

Many other portions of the ’792 patent specification’s detailed description were also copied from prior art publications, such as online encyclopedias. For example, the disclosure at 25:65-26:17 and 26:26-26:42 of the ’792 patent (Ex.

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1001) regarding the physics of thermocouples was copied from the 2008 New World Encyclopedia online entry for “Thermocouple” (Ex. 1011, 1). The disclosure at 26:63-28:12 (Ex. 1001) regarding the types of thermocouples available for use with the purported invention was copied from a “Thermocouple Wire Report” available online since at least 2004 (Ex. 1012, 1, 7-9). The disclosure at 29:13-29:33 (Ex. 1001) regarding pressure sensors that could be used was copied from a prior art Wikipedia entry for “Pressure sensor” (Ex. 1013, 1). And the disclosure at 30:1-32:9 (Ex. 1001) regarding the types of flow meters that “can be utilized with the present invention” (*id.*, 30:2, 31:7) were copied from a prior art Wikipedia entry for “Flow measurement” (Ex. 1014, 1-4). Mueller expects that discovery in the related district court proceeding involving the ’792 patent will reveal even more evidence of copying from the prior art.

**C. The Prosecution History**

The application for the ’792 patent was filed on January 14, 2015, as a continuation-in-part application and purported to claim priority to several prior, domestic applications. (Ex. 1002, 133-134.) The application was filed and prosecuted by Klicpera. (*Id.*, 3.) The application was examined under the pre-AIA first to invent provisions. (*Id.*, *e.g.*, 484.)

The Examiner initially rejected all claims under 35 U.S.C. § 112 on numerous grounds, but indicated that the claims would be allowable if rewritten to overcome

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the rejections. (*Id.*, 488-491.) In the reasons for indicating allowance, the Examiner specifically referenced limitations in independent claim 1 requiring that “said base station functions as a mesh-enabled device . . .” and limitations in independent claim 1 requiring that “said receiving station having the capability to coordinate mesh-enabled technology . . .” that were purportedly not disclosed in the prior art. (*Id.*, 491-492.) After various claim amendments were made in an attempt to address the Section 112 rejections (Ex. 1020, 539-552, 658-671), the application was allowed. (*Id.*, 679.) As explained herein, however, the Examiner would not have allowed the claims if he had known that all the disclosure in the application regarding “mesh-enabled” devices such as access points and “mesh-enabled” technology had been copied from the prior art *PG&E SmartMeter* webpage (Ex. 1006).

Also of note for purposes of this Petition, in response to the first office action Klicpera submitted a Rule 131 Declaration stating that he conceived of monitoring and controlling water use from a remote location as a modification to his existing home automation system that allowed him to “remotely, using a cell phone, assess and control the lights and security of a property.” (Ex. 1020, 569-571, ¶¶7-13.)

**D. The Pending *Ex Parte* Reexamination**

On August 5, 2019, Klicpera, on behalf of Rein Tech, filed a request for *ex parte* reexamination of all claims 1-34 of the ’792 patent. (Ex. 1003, 11.) In the request, Rein Tech admitted that U.S. Patent No. 9,019,120 to Broniak (Ex. 1004)

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in view of U.S. Publ. No. 2011/0035063 to Palayur (Ex. 1015) renders all claims 1-34 obvious. (Ex. 1003, 11). Rein Tech also admitted that claims 1-2, 4-6, 10, 13, 17, 24-26, 31, and 34 are anticipated and/or obvious under on one or more of sixteen (16) independent grounds. (*Id.*, 11-12).

With the request, Rein Tech also submitted a preliminary amendment with substantive amendments to the specification and most of the claims. (*Id.*, 34-72.) The preliminary amendment seeks to add, delete, and modify various limitations in independent claims 1 and 2, as well as numerous dependent claims. (*Id.*, 58-72.) Such proposed amendments amount to a concession that all claims of the '792 patent are unpatentable. *M&P Golf v. Max Out Golf*, IPR2016-00784, Paper 43 at 4, 2017 Pat. App. LEXIS 11467, \*5 (PTAB Aug. 30, 2017) (construing claim amendments made by patent owner in concurrent, *ex parte* reexamination to be “an abandonment of contest and a concession of unpatentability” as to original claims of issued patent).

On September 30, 2019, the Examiner issued a decision granting *ex parte* reexamination of all claims, 1-34. (*Id.*, 566.) The Examiner acknowledged that “[e]ach reference listed [by Rein Tech] is admitted to be prior art under 35 USC §102 and 35 USC §103.” (*Id.*, 556.) The Examiner agreed that many of the cited references and combinations raise substantial new questions of patentability. (*Id.*, 564-576.)

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**E. The Earliest Effective Priority Date for the Challenged Claims**

The application for the '792 patent, Appl. No. 14/596,460 (“the '460 application”), was filed on January 14, 2015, as a continuation-in-part application of each of three original applications, filed on August 11, 2009, February 26, 2013, and December 5, 2014, respectively. (Ex. 1001; Ex. 1002, 133-134.) The '460 application also claims the benefit of provisional Appl. No. 62/095,024 filed on December 21, 2014. (*Id.*)

Challenged independent claim 1 includes the following limitations: “said base station includes mesh-enabled circuitry that can communicate with other base stations for transferring water flow, water energy and/or water quality data; [and] said base station(s) functioning as one or more access points that transfer said water flow, water energy and/or water quality data.” (Ex. 1001, Claim 1.) Challenged independent claim 2 similarly includes the following limitations: “said receiving station includes mesh-enabled circuitry that can communicate with other receiving stations for transferring water flow, water energy and/or water quality data to one or more access points; said receiving station or a custom transfer apparatus functioning as one or more access points for transferring said water flow, water energy and/or water quality data . . . .” (*Id.*, Claim 2.) These “mesh-enabled” and “access point” features were copied from the *PG&E* webpage (Ex. 1006) and added to priority Appl. No. 14/561,271 (“the '271 application”) (now U.S. Patent No. 9,494,480) filed



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on December 5, 2014, (Ex. 1016, 1:46-2:20) and to the priority provisional application filed on December 21, 2014 (Ex. 1017, ¶¶[05]-[07]). (Madisetti ¶53.) These features are not disclosed or supported in the earlier-filed, priority applications, now U.S. Patent Nos. 9,061,307 (Ex. 1010) and 9,297,150 (Ex. 1009). (Madisetti ¶53.)

Consequently, the earliest priority date for the Challenged Claims (independent claims 1 and 2 and their challenged dependent claims) is the filing date of the '271 application, i.e., December 5, 2014. (Madisetti ¶54.) Indeed, in the pending *ex parte* reexamination of the '792 patent (discussed above), the Examiner determined that the effective filing date of all claims 1-34 is even later, namely, the filing date of the '460 application on January 14, 2015. (Ex. 1003, 560.)

Moreover, as discussed above, all of the detailed description intended to support the scope of the '792 patent claims with respect to the “mesh-enabled” and “access point” features was copied from the *PG&E* SmartMeter webpage, which was published at least as early as July 12, 2010. (Ex. 1006.) Despite purporting to claim priority to the application for U.S. Patent Nos. 9,061,307 filed on August 11, 2009, the '792 patent cannot be granted an effective filing date prior to the copied disclosure of the *PG&E* webpage. Indeed, the “SmartMeter System” disclosed in the *PG&E* webpage is described in the “Background of the Invention” section of the '792 patent (Ex. 1001, 1:46-2:20) and thus qualifies as admitted prior art. In addition,



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Rein Tech has admitted in the *ex parte* reexamination that *Broniak*, which was filed on and has a (pre-AIA) 35 U.S.C. § 102(e) date of November 9, 2010, is prior art to all claims 1-34 of the '792 patent. (Ex. 1003, 11.)

The burden is on Rein Tech to establish priority. *Natural Alternatives Int'l v. Iancu*, 904 F.3d 1375, 1380 (Fed. Cir. 2018) (“[C]laims in a patent or patent application are not entitled to priority under § 120 at least until the patent owner *proves* entitlement to the PTO, the Board, or a federal court.”) (Emphasis in original.). Here, Rein Tech is unable to show that the Challenged Claims are entitled to an effective filing date or date of invention prior to the publication date of the *PG&E* webpage, the filing date of *Broniak*, or the other prior art references cited herein.

## **V. STATEMENT OF THE PRECISE RELIEF REQUESTED**

### **A. Claims for Which Review is Requested**

Mueller respectfully requests review under 35 U.S.C. § 311 of claims 1-5, 12, 14, 17, 19, 22, 23, and 27 of the '792 patent (the “Challenged Claims”), and the cancellation of the Challenged Claims as unpatentable.

### **B. Statutory Grounds of Challenge**

Mueller requests *inter partes* review and cancellation of the Challenged Claims of the '792 patent based on the following grounds:

**Ground 1:** Claims 1, 3, 5, 12, 17, and 22 are unpatentable under 35 U.S.C. §

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103 as obvious over *Broniak* and *Ransom* in view of *PG&E*.

**Ground 2:** Claims 2, 4, 14, 19, 23, and 27 are unpatentable under 35 U.S.C.

§ 103 as obvious over *Broniak* in view of *PG&E*.

**C. Citation of Prior Art**

In support of the grounds of unpatentability set forth above, Mueller cites the following prior art references:

Prior Art References	
<b>Ref. 1:</b>	<i>Broniak</i> , U.S. Patent No. 9,019,120 (Ex. 1004); issued on April 28, 2015, from an application filed in the United States on November 9, 2010; prior art under at least pre-AIA 35 U.S.C. §§ 102(b) and 102(e).
<b>Ref. 2:</b>	<i>Ransom</i> , U.S. Patent Publ. No. 2004/0193329 (Ex. 1005); published on September 30, 2004, from an application filed in the United States on January 5, 2004; prior art under at least pre-AIA 35 U.S.C. §§ 102(b) and 102(e).
<b>Ref. 3:</b>	<i>PG&amp;E</i> , SmartMeter System—How It Works, archived web page from July 12, 2010 (Ex. 1006), available at <a href="https://web.archive.org/web/20100712031615/https://www.pge.com/myhome/customerservice/smartmeter/howitworks/">https://web.archive.org/web/20100712031615/https://www.pge.com/myhome/customerservice/smartmeter/howitworks/</a> , last accessed Oct. 9, 2019.

**VI. CLAIM CONSTRUCTION**

In an *inter partes* review, claims are “construed using the same claim

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construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b).” 37 C.F.R. § 42.100(b). Claims must be given their ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the invention in light of the specification and the prosecution history pertaining to the patent. *Id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-1313 (Fed. Cir. 2015) (*en banc*); *see also* 83 Fed. Reg. 51,340. Below, Mueller provides a construction for certain terms in the Challenged Claims. As to the remaining terms, for the purposes of this proceeding, those claims should be given their plain and ordinary meaning, as understood by a person of ordinary skill in the art and consistent with the intrinsic evidence.<sup>2</sup>

**A. Level of Ordinary Skill in the Art**

A person of ordinary skill in the art of the ’792 patent would have had a minimum of a Bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and two or more years of experience in the development or design of wireless communication systems, or the equivalent.

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<sup>2</sup> Mueller’s proposed constructions (or lack thereof) for the purpose of this proceeding are not an admission that any claims are valid under 35 U.S.C. § 112. Mueller expressly reserves the right to raise, and does not waive, any argument in any litigation that claim terms in the ’792 patent are indefinite or otherwise invalid.

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(Madisetti ¶57.) Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. (*Id.*) A person having this background would have understood how to design and build wireless communications systems for monitoring and controlling remote devices. (*Id.*)

**B. Term to be Construed**

Pursuant to 37 C.F.R. § 42.104(b)(3), Mueller proposes the following constructions.

**1. “remotely located”**

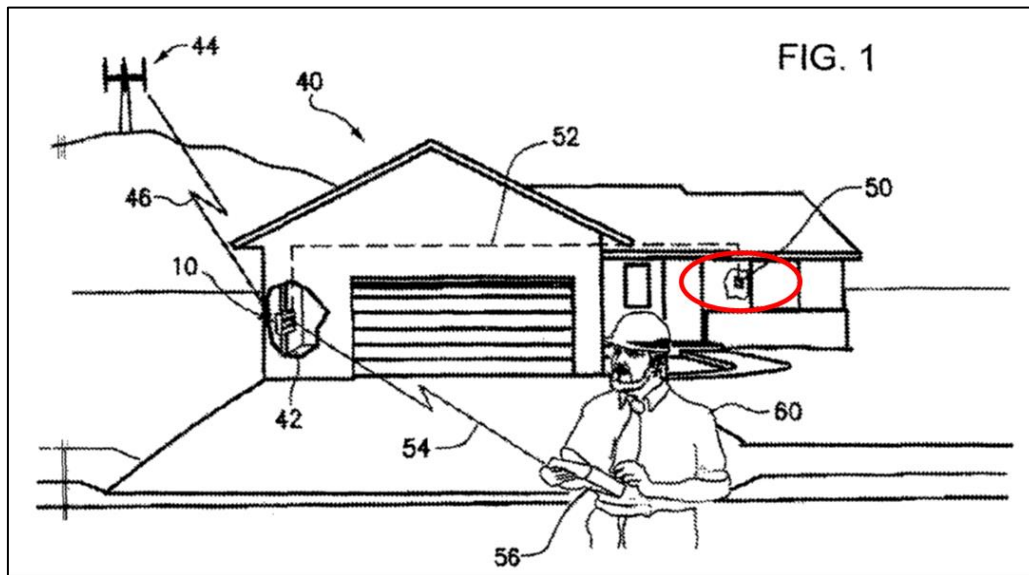
This term is recited in independent claim 2 as part of the phrase “said receiving station remotely located from said base station.” Under *Phillips*, this term means “located at a distance that is accessible by a wired or wireless communication means.” (Madisetti ¶69.)

This construction is mandated by the specification, which describes the display 50 (shown in Figure 1, below) as “remotely located” from the water monitoring apparatus 10 and accessible by a “wired or wireless communication means.” Ex. 1001, Abstract (“A wired or wireless means is designed to electronically communicate water use, water energy use and/or water quality information to a *remotely located* display apparatus.”), 7:54-58 (“The first wired or wireless communication means 52 can send data on various frequencies . . . to the first *remote*

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and/or recorder 50.”), 10:63-11:1 (“*Remote* display and/or a recording apparatus 50 (which is shown in more detail as 110 in FIG. 5) has the relatively important function of providing an individual or entity to review water use and water parameter data for auditing or monitoring purposes.”) Thus, the receiving station recited in claim 2 may be “remotely located” from the base station even if the two devices are on the same premises, as shown in Figure 1 of the ’792 patent. (Madisetti ¶69.)

**’792 Patent, Figure 1**



This construction is also consistent with the dictionary definition of the term “remotely” in the computer science context at the time of the purported invention. Ex. 1018 (“*Computer Science*: Located at a distance from another computer that is accessible by cables or other communications links: *a remote terminal.*”) (Emphasis in original).

## 2. “joint means”

This term is recited in independent claims 1 and 2 in means-plus-function form. Pursuant to 37 C.F.R. § 42.104(b)(3), Mueller proposes the following construction for this term in accordance with pre-AIA 35 U.S.C. § 112 ¶ 6 (now 35 U.S.C. § 112(f)):

**Identified Function:** for forming a joint. (Ex. 1001, Claims 1 and 2; Madisetti ¶70.)

**Corresponding Structure:** a water pipe union or a water pipe joint fabricated from typical metallic piping materials or polymeric materials. (Ex. 1001, 19:50-20:25, Figure 2; Madisetti ¶70.)

## 3. “wired or wireless electrical communication means”

This term is recited in claim 1 in means-plus-function form. Pursuant to 37 C.F.R. § 42.104(b)(3), Mueller proposes the following construction for this term in accordance with pre-AIA 35 U.S.C. § 112 ¶ 6 (now 35 U.S.C. § 112(f)):

**Identified Function:** for communicating water data. (Ex. 1001, Claim 1; Madisetti ¶71.)

**Corresponding Structure:** a transceiver or other software and hardware for using radio-frequency, Bluetooth, ZigBee, WiFi, optical, or other wireless technology, IP or DHCP protocols, or wire data transfer. (*Id.*, 8:3-15, 42:11-43, Figures 1 and 3; Madisetti ¶71.)

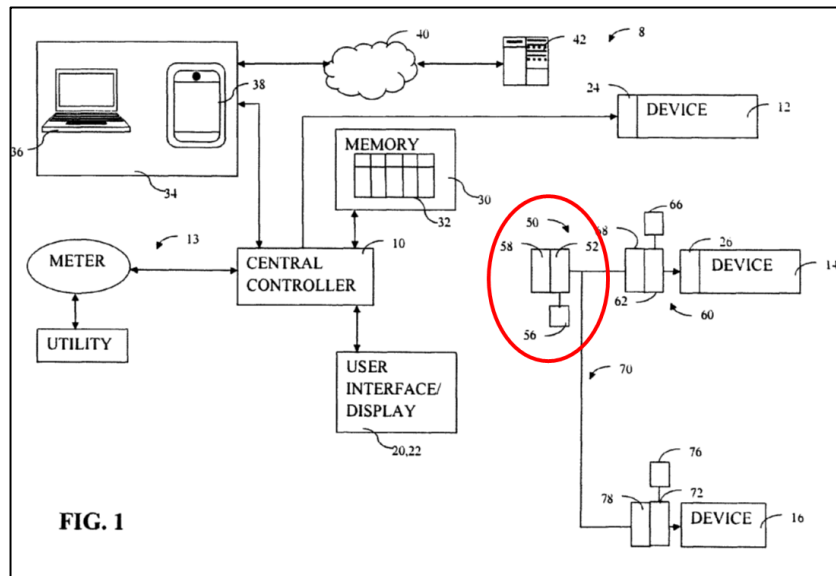
## **VII. THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER THE PRIOR ART.**

### **A. Overview of the Prior Art**

#### **1. *Broniak* – Water Meter that Transfers Data to Remote Computer for User Access Via Cell Phone**

*Broniak* generally relates to “monitoring water flow of water pipes and detecting leaks therein.” (Ex. 1004, 1:8-10.) *Broniak* discloses that “[p]ipeline leaks have the potential to go unnoticed” and can result in significant damage, including “loss to structure, foundational shifting, water utility cost increases, increased mold and insect infestation, etc. from a continuous flow of water leaking.” (*Id.*, 1:44-50.) To address these problems, *Broniak* proposes (with reference to Figure 1 reproduced below) a “main water meter” 52 “connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the controller 10 via a communication module 56.” (*Id.*, 3:52-55; Madisetti ¶72.)

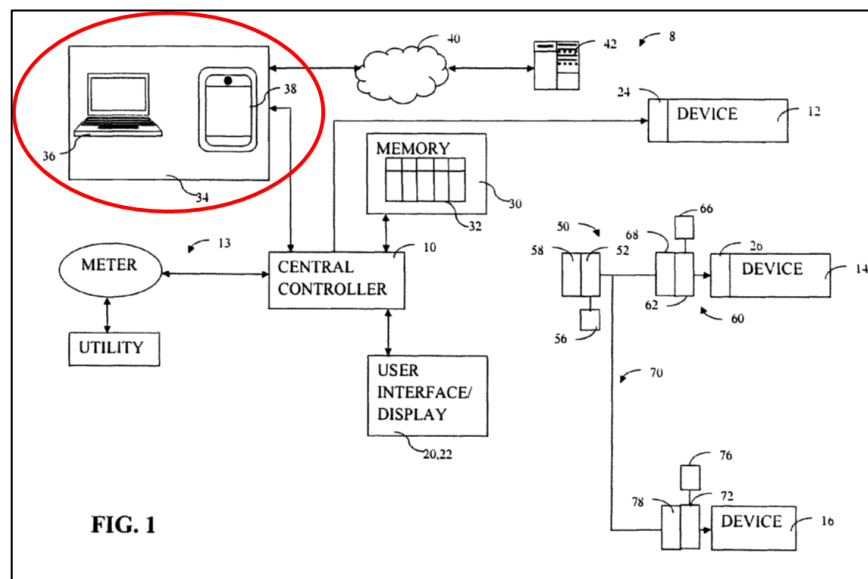
**Broniak, Figure 1**



*Broniak* discloses that “the controller 10 connects via either Ethernet or WiFi to the homeowner’s router and to a client application 34, for example, in a personal computer 36 and/or a mobile device 38,” and can “transfer data to a central server on the Internet.” (Ex. 1004, 4:56-61.) As *Broniak* explains, “[t]his allows for remote service and monitoring capability.” (*Id.*, 4:61-62.)



**Broniak, Figure 1**



*Broniak* discloses that the water meter calculates “[a] water flow rate, an average water amount, a total water amount, for example,” and “[i]f the total water flow amount exceeds [a] predetermined threshold, then a leak is determined as present.” (*Id.*, 6:54-56, 6:64-66.) *Broniak* teaches that “a warning is [then] provided to the homeowner or user, which may be via an internet connection of the home network, via text, email, and/or on a user display at the home.” (*Id.*, 6:66-7:2.) *Broniak* further teaches that “the total water flow amount and/or other measurements gathered regarding the water in the pipelines may be also provided to the user.” (*Id.*, 7:4-6.) Such a solution, *Broniak* explains, “can enable better and informed decisions for conserving water at the home.” (*Id.*, 7:6-7.)

*Broniak* was not disclosed to, cited by, or considered by the Examiner during

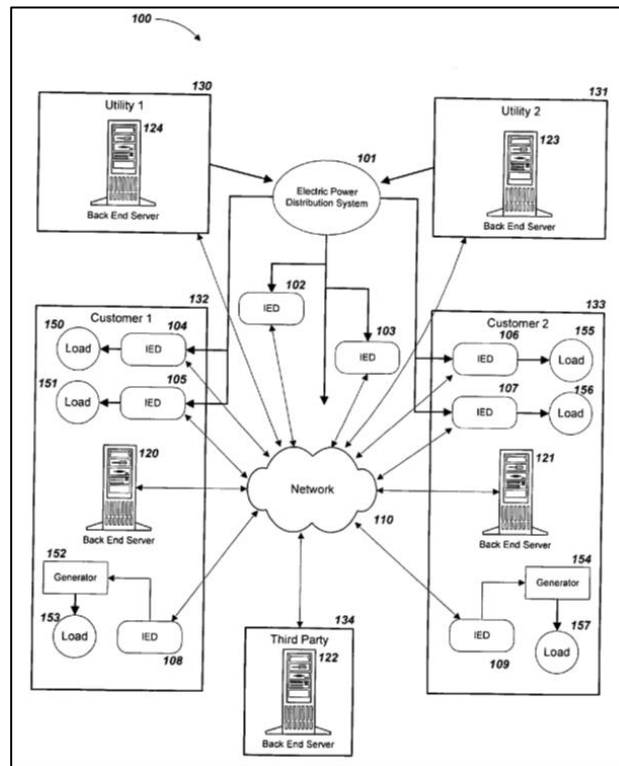
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prosecution of the '792 patent.

**2. *Ransom* – Using Protection Technology to Securely Provide Utility Data in a Confidential Format**

As discussed above, the disclosure in the '792 patent specification relating to data security was directly copied from *Ransom*. *Ransom* relates to a “power management architecture” that includes “intelligent electronic devices (‘IED’s’)” to “manage the flow and consumption of power from the system.” (Ex. 1005, Abstract.) While the disclosed system relates primarily to an electrical power system, *Ransom* discloses that the IEDs may include water meters. *Id.* ¶[0090] (“IEDs include . . . remote terminal units (‘RTUs’) [and] RTUs that measure water data”). With reference to Figure 1 below, *Ransom* discloses that IEDs 102-109 “measure, monitor and control quality, distribution, and consumption of electric power from the system 101,” and are interconnected via a network 110 such as the Internet. (*Id.*, ¶[0050]; Madisetti ¶76.)

***Ransom*, Figure 1**



*Ransom* discloses that “[m]ost channels between components in an [energy management] [s]ystem are insecure channels subject to security attacks including malicious acts such as forgery, denial of service, invasion of privacy and so forth” and that “[m]essages passed over insecure channels are subject to interception, tampering and fraud.” (Ex. 1005, ¶[0108].) *Ransom* teaches that as “systems expand and incorporate public networks, particularly the Internet, wireless networks and telephone systems, the need for secure transfer of data becomes crucial.” (*Id.*, ¶[0109].) Accordingly, *Ransom* discloses “various techniques, including encryption, authentication, integrity and non-repudiation that provide secure communications.”

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(*Id.*, ¶[0116].)

Encryption, explains *Ransom*, “provides privacy by preventing anyone but the intended recipient(s) of a message from reading it.” (*Id.*) “Authentication ensures that a message comes from the person from whom it purports to have come from.” (*Id.*) “Integrity ensures that a message was not altered in transit.” (*Id.*) And “[n]on-repudiation prevents the sender from denying that they sent a message.” (*Id.*) The *Ransom* specification includes detailed teachings relating to these and other security mechanisms and systems that “provide robust security” to a network and to a device on a network. (*Id.*, ¶[0108].)

Despite forming the basis for much of the detailed disclosure in the ’792 patent specification, *Ransom* was never disclosed to the USPTO during prosecution and was not cited or considered by the Examiner.

**3. PG&E – Mesh-Enabled Meters and the Use of Access Points to Transfer Utility Data**

As discussed above, the disclosure in the ’792 patent specification relating to RF mesh technology and the use of access points in a network was directly copied from *PG&E*. *PG&E* describes a “SmartMeter” system that “provides two-way communication between the meter at your home or business and the utility, using secure wireless network technology.” (Ex. 1006, 1.) *PG&E* discloses that the “system uses RF mesh technology, which allows meters and other sensing devices

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to securely route data via nearby meters and relay devices, creating a ‘mesh’ of network coverage.” (*Id.*) *PG&E* teaches that “[e]ach RF mesh-enabled device (meters, relays) is connected to several other mesh-enabled devices, which function as signal repeaters, relaying data to an access point.” (*Id.*) The access point, explains *PG&E*, “aggregates, encrypts, and sends the data back to PG&E over a secure commercial third party network.” (*Id.*, 1-2; Madisetti ¶80.)

*PG&E* discloses that the “resulting RF mesh network can span large distances and reliably transmit data over rough or difficult terrain.” (Ex. 1006, 2.) Moreover, explains *PG&E*, the “mesh continually optimizes routing to ensure information is passed from its source to its destination as quickly and efficiently as possible.” (*Id.*)

As explained above, the Examiner relied on the mesh-enabled and access point features of claims 1 and 2 to distinguish those claims from the prior art during prosecution. (Ex. 1002, 491-492.) *PG&E* was never disclosed to the USPTO during prosecution and was not cited or considered by the Examiner. Thus, the Examiner was not aware that the mesh-enabled and access point features in the application for the ’792 patent had been copied from the prior art.

**B. Ground 1: *Broniak* and *Ransom* in View of *PG&E* Renders Obvious Claims 1, 3, 5, 12, 17, and 22.**

**1. Rationale for Combining *Broniak* and *Ransom***

As discussed above, *Broniak* discloses a main water meter that transfers data

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to remote computers and a server over the Internet and allows users to access their water use data using a cell phone. (Ex. 1004.) As also discussed above, *Ransom* discloses using a variety of security mechanisms to protect utility data for transmission and access via the Internet. (Ex. 1005.) It would have been obvious to one of ordinary skill in the art to protect the water use data transmitted via the Internet in the *Broniak* system using the security mechanisms taught by *Ransom*. (Madisetti ¶83.)

Both *Broniak* and *Ransom* relate to the remote monitoring of utility meters using communications over a wireless network. *E.g.*, Ex. 1004, 4:56-63; Ex. 1005, ¶[0024]). While *Broniak* relates primarily to “monitoring water pipelines,” (Ex. 1004, 1:6-7), the system of *Broniak* is described more broadly as an “energy management system” and includes “managing power consumption” by devices such as home appliances. (*Id.*, 2:49-60.) Similarly, although *Ransom* relates primarily to an electrical power system, *Ransom* discloses that the “intelligent electronic devices (‘IED’s’)” within the system include water meters. (Ex. 1005, ¶[0090].) Thus, a skilled artisan would have recognized that *Broniak* and *Ransom* are within the same general field and directed to similar problems. (Madisetti ¶84.)

A person of ordinary skill in the art would have been motivated to protect the water use data transmitted via the Internet in the *Broniak* system using the security mechanisms taught by *Ransom* in order to provide privacy, ensure authenticity, and

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prevent tampering. (Madisetti ¶85.) For example, *Ransom* teaches that security techniques like authentication and encryption are needed to “prevent[] fraudulent substitution of . . . devices or spoofing of . . . data generation in an attempt to defraud” and to “enable[] users of unsecured networks, such as the internet, to securely and privately exchange data.” (Ex. 1005, ¶[0054].) *Ransom* also discloses the vulnerabilities of insecure channels and teaches that as “systems expand and incorporate public networks, particularly the Internet, wireless networks and telephone systems, the need for secure transfer of data becomes crucial.” (*Id.*, ¶[0108]-[0109].) A person of ordinary skill in the art would have looked to *Ransom* and found solutions for “provid[ing] robust security” to a network and to a device on a network. (*Id.*, ¶[0108]; Madisetti ¶85.)

A skilled artisan would have had a reasonable expectation of success by using the combination of *Broniak* and *Ransom*, and would have expected the system to yield predictable results. (Madisetti ¶86.) *Broniak* already discloses remotely monitoring a water meter and accessing water use data via a cell phone. (Ex. 1004, 3:53-55, 4:56-63, 5:65-6:2, Figure 1.) *Ransom* merely provides examples of security techniques that could be used to protect the water use data transmitted and accessed in the *Broniak* system. (Madisetti ¶86.)

The obviousness of protecting water use data in a system like *Broniak*’s using the security mechanisms taught by *Ransom* is confirmed by Klicpera’s copying of

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extensive detailed disclosure from *Ransom* for use in the '792 patent.

**2. Rationale for Combining *PG&E* with *Broniak* and *Ransom***

As described above, *PG&E* addressed the need for a utility meter network that “can span large distances and reliably transmit data over rough or difficult terrain.” (Ex. 1006, 2.) *PG&E* teaches a mesh network that “continually optimizes routing to ensure information is passed from its source to its destination as quickly and efficiently as possible.” (*Id.*)

It would have been obvious to one of ordinary skill in the art to provide the main water meter of *Broniak* that transfers data to remote computers and a server over the Internet, and allows users to access their water use data using a cell phone, using the RF mesh technology as taught by *PG&E*. (Madisetti ¶89.) Both *Broniak* and *PG&E* relate to providing two-way communication between utility meters and the utility. *E.g.*, Ex. 1004, 3:20-35, 4:56-63, 5:47-50; Ex. 1005, 1. *PG&E* relates to a network of electric or gas meters (Ex. 1005, 1-2), and while *Broniak* relates primarily to “monitoring water pipelines,” (Ex. 1004, 1:6-7), the system of *Broniak* is described more broadly as an “energy management system” and includes “managing power consumption” by devices such as home appliances. (*Id.*, 2:49-60.) A skilled artisan would have recognized that *Broniak* and *PG&E* are within the same general field and directed to similar problems. (Madisetti ¶89.) A skilled artisan would have also recognized that *PG&E*’s teachings as to the advantages of providing



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RF mesh technology for electric or gas meters would also be applicable to networks of water meters. (*Id.*)

A person of ordinary skill in the art would have been motivated to incorporate the RF mesh technology taught by *PG&E* into the *Broniak* system in order to provide a network that “can span large distances and reliably transmit data over rough or difficult terrain” and “ensure information is passed from its source to its destination as quickly and efficiently as possible.” (Ex. 1006, 2; Madisetti ¶90.)

A skilled artisan would have had a reasonable expectation of success by using the combination of *Broniak*, *Ransom*, and *PG&E*, and would have expected the system to yield predictable results. (Madisetti ¶91.) *Broniak* already discloses an RF network comprising utility meters, controllers, client devices, and a central server. Ex. 1004, Figure 1. *PG&E* merely provides additional programming that could be used to optimize routing and provide network reliability. (Madisetti ¶91.)

The obviousness of using the RF mesh technology taught by *PG&E* in a system like *Broniak*’s is confirmed by Klicpera’s copying of *PG&E*’s disclosure for use in the ’792 patent.

### **3. Claim 1**

In this Petition, Mueller’s application of the prior art to the Challenged Claims is based on the current language of the Challenged Claims in the ’792 patent as

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issued.<sup>3</sup> As noted above, Rein Tech is seeking to substantively amend the Challenged Claims in the pending *ex parte* reexamination of the '792 patent (Ex. 1003, 58-72). Should a reexamination certificate issue with any amendments to the Challenged Claims, or should Rein Tech seek to make claim amendments in this proceeding, Mueller reserves the right to provide additional argument and evidence to address such amendments.<sup>4</sup>

***a. A water use monitoring and leak detection apparatus comprising:***

*Broniak* discloses this feature. *Broniak* teaches that “[m]ethods and systems are disclosed for monitoring water leaks within a home.” (Ex. 1004, Abstract.) The disclosure of *Broniak* “relates to monitoring water flow of water pipes and detecting leaks therein.” (*Id.*, 1:9-10; Madisetti ¶94.)

***b. a base station apparatus designed to be connected to a main water supply means;***

*Broniak* discloses this feature by teaching, with reference to Figure 1, that “[a]

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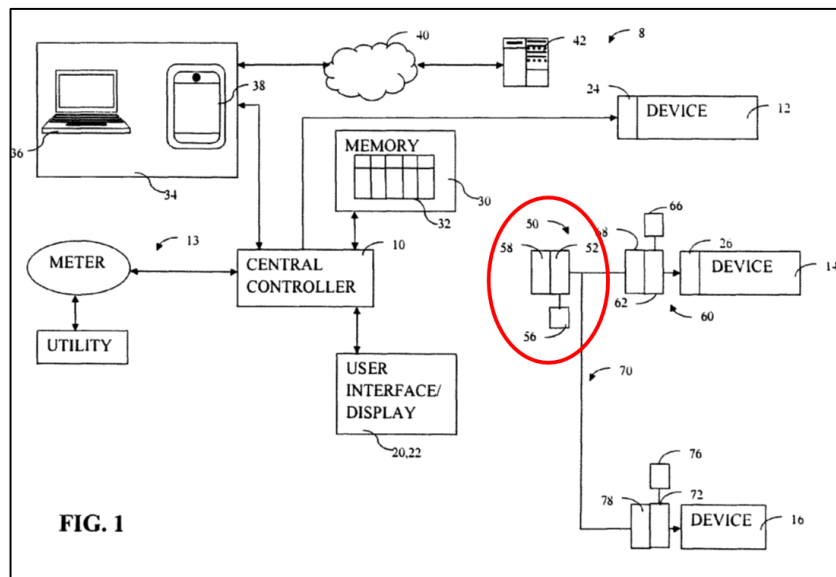
<sup>3</sup> On April 24, 2018, a Certificate of Correction issued with changes to claim 19 (Ex. 1002, 471), which is not being challenged in this Petition.

<sup>4</sup> For example, and without limitation, Mueller reserves the right to show that any proposed substitute claims in this proceeding constitute non-statutory subject matter under 35 U.S.C. § 101. *See Amazon.com, Inc. v. Uniloc Luxembourg S.A.*, IPR2017-00948, Paper No. 31 at 56-63 (PTAB Aug. 1, 2018) (concluding that substitute claims recite patent ineligible subject matter under § 101).

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main water meter 52 is operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the controller 10 via a communication module 56.” (Ex. 1004, 3:52-55; Madisetti ¶¶95-96.)

**Broniak, Figure 1**



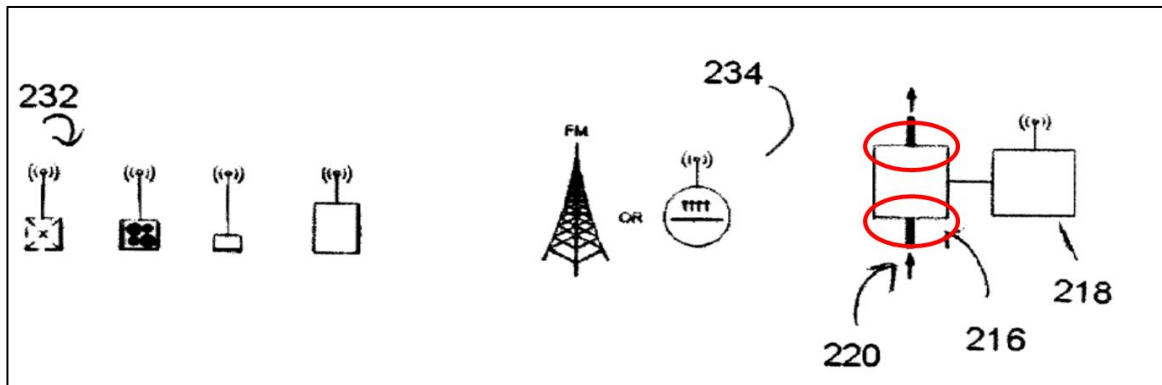
*Broniak* also discloses that “[t]he main inlet pipe 50, for example, provides water to all devices of the home that consume water, such as through branch pipelines 60 and 70 that run from the main water inlet pipe 50 to devices 14 and 16 respectively.” (*Id.*, 3:38-41; *see also id.*, 6:38-42.)

- c. *said base station includes a joint means for connecting to a cold/ambient water supply, or a joint means for connecting to a cold/ambient water supply and a joint means for connecting to a hot water supply, said base station have a joint means for connecting to outgoing water supply line(s) for a home residence, company or*

***building structure;***

*Broniak* discloses this feature by teaching that the “main water meter 52 is operatively connected to the main water inlet pipe 50” (Ex. 1001, 3:52-53), and that the “water meter 216 is inserted into the home’s incoming water line 220.” (Ex. 1004, 5:42-43; *see also id.*, 6:38-42, Figure 2.)

**Broniak, Figure 2**



One of ordinary skill in the art would understand from this disclosure that the water meter of *Broniak* includes a joint means for connecting to a cold/ambient water supply and a joint means for connecting to the outgoing water supply line for a home residence. (Madisetti ¶¶97-98.)

- d. electrical circuitry including one or more microprocessors or microcontrollers with a power source contained with said base station apparatus; said power source is either AC powered, DC powered, or powered with one or more batteries, said power source is electrically connected to said electrical circuitry;*

*Broniak* discloses this feature by teaching that the “main water meter 52 is

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operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the controller 10 via a communication module 56.” (Ex. 1004, 3:52-55.) *Broniak* also discloses that “[t]he water meter 216 gives an output for each gal/liter/etc. of water consumed, for example, over or during a period of time,” and that “[t]his output is sent to the radio module 218 that in turn sends the information back to the central controller 10.” (*Id.*, 5:43-47.) In addition, *Broniak* teaches that “[a] water flow rate, an average water amount, a total water amount, for example, can be calculated by the flow meter.” (*Id.*, 6:54-56.) A skilled artisan would understand from this disclosure that the water/flow meter and/or the communication/radio module includes one or more microprocessors or microcontrollers with an AC, DC, or battery power source contained with the base station apparatus and electrically connected to the microprocessors or microcontrollers. (Madisetti ¶99.)

***e. one or more flow sensors in communication with a water supply, said one or more flow sensors in electrical communication with said electrical circuitry;***

*Broniak* discloses this feature by teaching that the “main water meter 52 is operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the controller 10 via a communication module 56.” (Ex. 1004, 3:52-55.) *Broniak* also discloses that “[t]he water meter 216 gives an output for each gal/liter/etc. of water

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consumed, for example, over or during a period of time,” and that “[t]his output is sent to the radio module 218 that in turn sends the information back to the central controller 10.” (*Id.*, 5:43-47; Madisetti ¶100.)

- f. one or more wired or wireless electrical communication means, said wired or wireless electrical communication means having the capability to transfer water parameter, water energy and/or water quality information or data to one or more remote apparatuses,*

*Broniak* discloses this feature by teaching that the water flow information is communicated to the controller via a communication module (Ex. 1004, 3:52-55), and that “the controller 10 connects via either Ethernet or WiFi to the homeowner’s router and to a client application 34, for example, in a personal computer and/or a mobile device 38.” (*Id.*, 4:56-59.) *Broniak* further teaches that the “controller 10 also has the ability to periodically transmit data to a central server on the Internet 40.” (*Id.*, 4:59-61; *see also id.*, 6:47-50, Figure 1; Madisetti ¶101.)

- g. said wired or wireless electrical communication means utilizes protection technology to securely provide water use, water energy and/or water quality information and/or data in a confidential format;*

*Broniak* and *Ransom* render this feature obvious. (Madisetti ¶¶102-104.) *Broniak* discloses that the water flow information is communicated to the controller via wired or wireless communication means (Ex. 1004, 5:34-37), that the controller is connected via Ethernet or WiFi to the personal computer or mobile device, and

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that the controller can transmit water flow data to a central server on the Internet.  
(*Id.*, 4:56-61.)

*Ransom* discloses “various techniques, including encryption, authentication, integrity and non-repudiation that provide secure communications.” (Ex. 1005, ¶[0116].) *Ransom* teaches that “[e]ncryption provides privacy by preventing anyone but the intended recipient(s) of a message from reading it,” “[a]uthentication ensures that a message comes from the person from whom it purports to have come from,” “[i]ntegrity ensures that a message was not altered in transit,” and “[n]on-repudiation prevents the sender from denying that they sent a message.” (*Id.*) *Ransom* also includes detailed teachings relating to these and other security mechanisms and systems that “provide robust security” to a network and to a device on a network. (*Id.*, ¶[0108].)

As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to protect the water use data transmitted via the Internet in the *Broniak* system using the security mechanisms taught by *Ransom* in order to provide privacy, ensure authenticity, and prevent tampering. (Madisetti ¶104.) Thus, *Broniak* in view of *Ransom* renders this feature obvious. (*Id.*)

- h. said base station includes mesh-enabled circuitry that can communicate with other base stations for transferring water flow, water energy and/or water quality data; said base station(s) functioning as one or more access points that transfer said water flow, water***

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***energy and/or water quality data, using encryption and  
identification technology to an internet connection;***

*Broniak* and *Ransom* in view of *PG&E* renders this feature obvious. (Madisetti ¶¶105-107.) *Broniak* discloses that the water meter and radio module transfer water flow information. (Ex. 1004, 3:52-55.) *Ransom* discloses the use of encryption and identification technology for protecting data transmitted via the Internet. (Ex. 1005, ¶¶[0118] (describing public key encryption), [0142]-[0162] (describing the use of identities to “provide a guarantee or assurance that EM [energy management] data comes from a given source EM Component and has not been tampered with or corrupted”).)

*PG&E* discloses a meter network that “uses RF mesh technology, which allows meters and other sensing devices to securely route data via nearby meters and relay devices, creating a ‘mesh’ of network coverage.” (Ex. 1006, 1) *PG&E* also teaches that “[e]ach RF mesh-enabled device (meters, relays) is connected to several other mesh-enabled devices, which function as signal repeaters, relaying data to an access point.” (*Id.*) *PG&E* discloses that “[t]he access point aggregates, encrypts, and sends the data back to PG&E over a secure commercial third party network.” (*Id.*, 1-2.) A skilled artisan would understand from this disclosure, in view of the ’792 patent specification, that *PG&E* teaches a base station that includes mesh-enabled circuitry that can communicate with other base stations and that the base



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station(s) function as one or more access points. (Madisetti ¶106.) Indeed, all the supporting disclosure regarding mesh-enabled circuitry and access points in the '792 patent was copied from *PG&E*. (Ex. 1001, 1:46-2:20, 9:40-52, 19:2-15, 43:36-60.)

As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to protect the water use data transmitted via the Internet in the *Broniak* system using the security mechanisms taught by *Ransom* in order to provide privacy, ensure authenticity, and prevent tampering. (Madisetti ¶107.) As also explained above, a skilled artisan would have been motivated and found it obvious to incorporate the RF mesh technology taught by *PG&E* into the *Broniak* system in order to provide a network that “can span large distances and reliably transmit data over rough or difficult terrain” and “ensure information is passed from its source to its destination as quickly and efficiently as possible.” (Ex. 1006, 2; Madisetti ¶107.) Accordingly, this feature is rendered obvious. (Madisetti ¶107.)

- i. said water flow, water energy and/or water quality data transferred over the internet connection to one or more remote computers or computer servers, and;*

*Broniak* discloses this feature by teaching that the water flow information is communicated to the controller via a communication module (Ex. 1004, 3:52-55), and that “the controller 10 connects via either Ethernet or WiFi to the homeowner’s router and to a client application 34, for example, in a personal computer and/or a

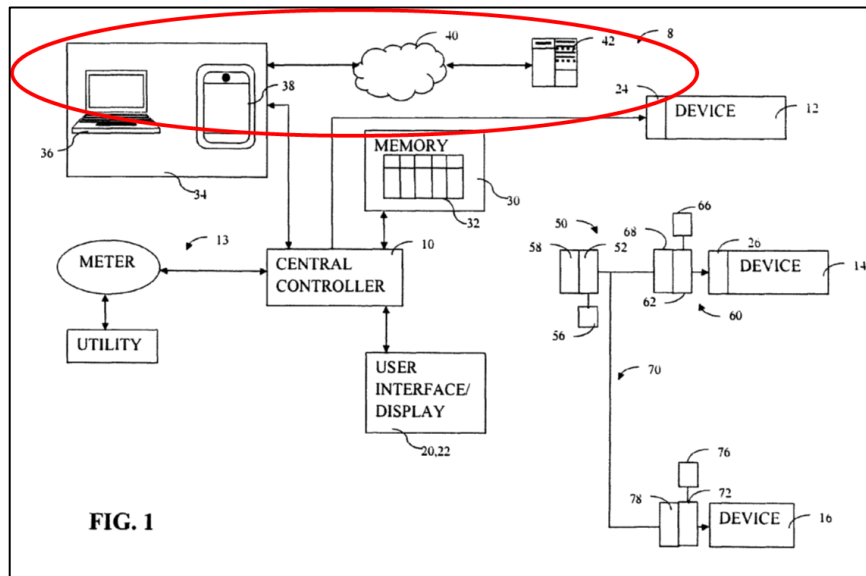
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mobile device 38.” (*Id.*, 4:56-59.) *Broniak* further teaches that the “controller 10 also has the ability to periodically transmit data to a central server on the Internet 40.” (*Id.*, 4:59-61; *see also id.*, 6:47-50, Figure 1; Madisetti ¶108.)

- j. said remote computers or servers allow registered owners and users to access their registered water flow, water energy and/or water quality data using a cell phone, smart phone, mobile phone, or a mobile electronic communication device.*

*Broniak* discloses this feature by teaching that “the system 8 has the capability for the homeowner to log onto a secure web portal and view data from their home. This will allow consumers additional flexibility to monitor their home while away.” (Ex. 1004, 6:12-15.) *Broniak* also discloses that the “server 42 can keep records of all homes therein that may be accessed remotely via the Internet.” (*Id.*, 4:62-63.) *See also id.*, Figure 1; Madisetti ¶109.

**Broniak, Figure 1**



**4. Claim 3**

- a. The water use monitoring and leak detection apparatus of claim 1, wherein said cell phone, smart phones, mobile phones, mobile electronic communication device such as PDAs, tablets (refers to all current and variants, revisions and generations of the APPLE®, SAMSUNG®, HP®, ACER®, MICROSOFT®, NOOK®, GOOGLE®, SONY®, KINDLE® and other tablets manufactured by these and other manufactures), APPLE TOUCH®, a smart or internet capable television, wireless timepiece or wireless watch and other electronic apparatuses with Wi-Fi and wireless capability, and remote computers and controllers having internet, wireless cell format technology connectivity utilizing cellular, Wi-Fi, ZigBee and/or Bluetooth, and any combinations thereof, to communication with the remote cellular phones (with cellular equipment, public switched telephone network lines, satellite, microwave, tower and mesh technology).*

*Broniak* discloses this feature by teaching that the water flow information is

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communicated to the controller via a communication module (Ex. 1004, 3:52-55), and that “the controller 10 connects via either Ethernet or WiFi to the homeowner’s router and to a client application 34, for example, in a personal computer and/or a mobile device 38.” (*Id.*, 4:56-59.) *Broniak* further teaches that the “controller 10 also has the ability to periodically transmit data to a central server on the Internet 40.” (*Id.*, 4:59-61; *see also id.*, 6:47-50, Figure 1.) *Broniak* also discloses that the “server 42 can keep records of all homes therein that may be accessed remotely via the Internet.” (*Id.*, 4:62-63.) (Madisetti ¶110.)

**5. Claim 5**

- a. The water use monitoring and leak detection apparatus of claim 1, further comprising said base station including an electronic water control valve wherein said base station is programmed to automatically turns off the main water supply when a leak is detected or alternately can send an alert signal when a leak is detected to said cell phone, smart phone, mobile phone, or other mobile electronic communication device wherein a user is provided an election to send a command to the base station to control the electronic water control valve to turn off or leave on the main water supply.*

*Broniak* discloses this feature by teaching that “the system 8 includes shut off valves 58, 68, and 78 at respective pipelines 50, 60 and 70,” and that “[t]he central controller 10 may receive input from the user or homeowner in response to [a] warning or message, and the user, for example, may respond with instructions to shut off the pipelines 50, 60, and/or 70 via the respective shut off valve 58, 68 and

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78.” (Ex. 1004, 5:10-16.) *Broniak* also teaches that “[a] water flow rate, an average water amount, a total water amount, for example, can be calculated by the flow meter,” (*id.*, 6:54-56), and “[i]f the total water flow amount exceeds [a] predetermined threshold, then a leak is determined as present, [and] a warning is provided to the homeowner or user, which may be via an internet connection of the home network, via text, email, and/or on a user display at the home.” (*Id.*, 6:64-7:2.) *Broniak* discloses that “the network may [then] receive a response from the user to shut off different pipelines or the main water inlet pipeline to the home via shut off valve.” (*Id.*, 7:11-13.) *Broniak* teaches that the “controller sends information to the meter for controlling the valve,” and that “a solenoid device may be used for operating the shut off valve and sealing off the pipeline where the leak exists or the main water line pipe to the home.” (*Id.*, 7:13-17.) (Madisetti ¶111.)

**6. Claim 12**

- a. The water use monitoring and leak detection apparatus of claim 1, further comprising a water control means or a variable water flow means, said water control means or variable water flow means controlled by programming instructions from said microprocessor or microcontroller for turning on and off said water control means or setting a variable water flow means, said water control means or variable water flow means can be activated by an owner's or user's cell phone, smart phones, mobile phone, or other mobile electronic communication device, or by a remote apparatus or computer or alternately activated by said one or more wireless or wired means controlled by a municipality or*

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***governmental agency.***

*Broniak* discloses this feature by teaching that “the system 8 includes shut off valves 58, 68, and 78 at respective pipelines 50, 60 and 70,” and that “[t]he central controller 10 may receive input from the user or homeowner in response to [a] warning or message, and the user, for example, may respond with instructions to shut off the pipelines 50, 60, and/or 70 via the respective shut off valve 58, 68 and 78.” (Ex. 1004, 5:10-16.) *Broniak* also teaches that “[a] water flow rate, an average water amount, a total water amount, for example, can be calculated by the flow meter,” (*id.*, 6:54-56), and “[i]f the total water flow amount exceeds [a] predetermined threshold, then a leak is determined as present, [and] a warning is provided to the homeowner or user, which may be via an internet connection of the home network, via text, email, and/or on a user display at the home.” (*Id.*, 6:64-7:2.) *Broniak* discloses that “the network may [then] receive a response from the user to shut off different pipelines or the main water inlet pipeline to the home via shut off valve.” (*Id.*, 7:11-13.) *Broniak* teaches that the “controller sends information to the meter for controlling the valve,” and that “a solenoid device may be used for operating the shut off valve and sealing off the pipeline where the leak exists or the main water line pipe to the home.” (*Id.*, 7:13-17.) (Madisetti ¶112.)

**7. Claim 17**

***a. The water use monitoring and leak detection apparatus***

***of claim 1, wherein the base station can be incorporated into or serve as the pressure regulator or primary water meter at a residential home or commercial facility.***

*Broniak* discloses this feature by teaching that “[a] main water meter 52 is operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the controller 10 via a communication module 56.” (Ex. 1004, 3:52-55; Madisetti ¶113.)

## **8. Claim 22**

- a. The water use monitoring and leak detection apparatus of claim 1, wherein said monitoring and water source detection can be displayed in a line, graphical or other format one or more wireless or wired remote apparatuses comprises a typical cell phone, smart phones, mobile phone, or other mobile electronic communication device.***

*Broniak* discloses this feature by teaching that the water flow information is communicated to the controller via a communication module (Ex. 1004, 3:52-55), and that “the controller 10 connects via either Ethernet or WiFi to the homeowner’s router and to a client application 34, for example, in a personal computer and/or a mobile device 38.” (*Id.*, 4:56-59.) *Broniak* further teaches that the “controller 10 also has the ability to periodically transmit data to a central server on the Internet 40.” (*Id.*, 4:59-61; *see also id.*, 6:47-50, Figure 1.) *Broniak* also discloses that the “server 42 can keep records of all homes therein that may be accessed remotely via the Internet.” (*Id.*, 4:62-63.) In addition, *Broniak* teaches that “[a] table is generated for each monitored device that includes historical home data and data that is currently

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updated, which may be used in a client application running on a device, such as a computer or mobile phone, for presenting graphs or other data to the user.” (*Id.*, 5:65-6:2.) (Madisetti ¶114.)

**C. Ground 2: *Broniak* in View of *PG&E* Renders Obvious Claims 2, 4, 14, 19, 23, and 27**

**1. Rationale for Combining *Broniak* with *PG&E***

As explained above, a person of ordinary skill in the art would have been motivated to incorporate the RF mesh technology taught by *PG&E* into the *Broniak* system in order to provide a network that “can span large distances and reliably transmit data over rough or difficult terrain” and “ensure information is passed from its source to its destination as quickly and efficiently as possible.” (Ex. 1006, 2; Madisetti ¶115.)

**2. Claim 2**

**a. A water use monitoring and leak detection apparatus comprising:**

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.3.a. for claim 1, which addresses identical language. (Madisetti ¶116.)

**b. a base station in close proximity to a main water supply;**

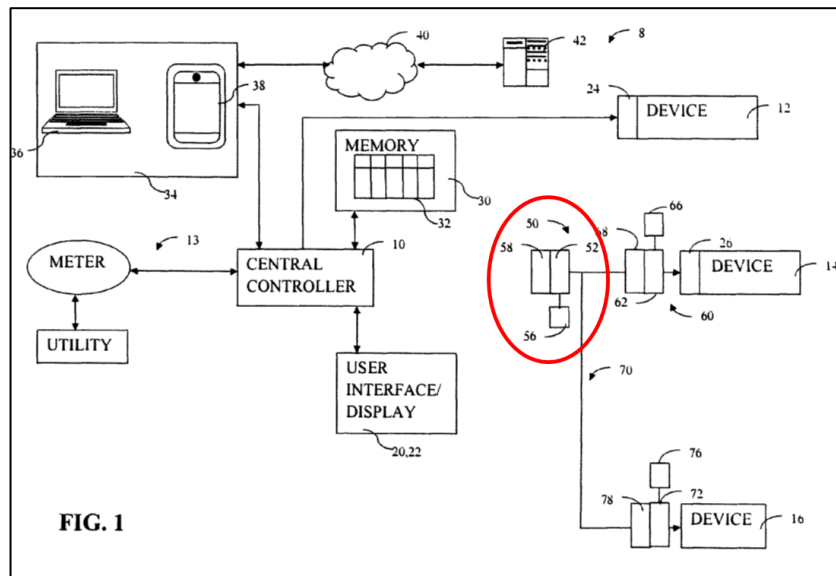
*Broniak* discloses this feature by teaching, with reference to Figure 1, that “[a] main water meter 52 is operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating



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information gathered to the controller 10 via a communication module 56.” (Ex. 1004, 3:52-55; *see also id.*, 6:38-42, Figure 1; Madisetti ¶117.)

**Broniak, Figure 1**



- c. *said base station includes a joint means for connecting to a cold/ambient water supply, or a joint means for connecting to a cold/ambient water supply and a joint means for connecting to a hot water supply, said base station have a joint means for connecting to outgoing water supply line(s) for a home residence, company or building structure;*

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.3.c. for claim 1, which addresses identical language. (Madisetti ¶118.)

- d. *said base station further comprising a first power supply, said first power supply is either AC powered, DC powered, or powered with one or more batteries, said first power supply electrically connected to a first circuitry which has one or more microprocessors or microcontrollers;*

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*Broniak* discloses this feature for the same reasons explained above in Section VII.B.3.d. for claim 1, which addresses substantially similar language. (Madisetti ¶119.) The only differences between this feature and that of claim 1 are the order of the limitations presented and the use of terms such as “first power supply” and “first circuitry” instead of “power source” and “electric circuitry.” These are not substantive differences for purposes of this Petition. (Madisetti ¶119.)

- e. one or more water flow sensors in communication with a water supply, said one or more water flow sensors in electrical connection with a first electrical circuitry;*

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.3.e. for claim 1, which addresses nearly identical language. (Madisetti ¶120.) The only difference between this feature and that of claim 1 is that whereas claim 1 recites “in electrical communication,” claim 2 recites “in electrical connection,” which is not a substantive difference for purposes of this Petition. (Madisetti ¶120.)

- f. said base station monitors and processes water parameter data including water flow, water energy, and/or water quality data; said base station includes software that controls and sequences the water parameter data and prepares said data for wired or wireless transfer;*

*Broniak* discloses this feature by teaching that the “main water meter 52 is operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the

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controller 10 via a communication module 56.” (Ex. 1004, 3:52-55.) *Broniak* also discloses that “[t]he water meter 216 gives an output for each gal/liter/etc. of water consumed, for example, over or during a period of time,” and that “[t]his output is sent to the radio module 218 that in turn sends the information back to the central controller 10.” (*Id.*, 5:43-47.) In addition, *Broniak* teaches that “[a] water flow rate, an average water amount, a total water amount, for example, can be calculated by the flow meter.” (*Id.*, 6:54-56.) (Madisetti ¶121.)

One of ordinary skill in the art would understand from this disclosure that the water/flow meter and/or the communication/radio module includes software that controls and sequences the water parameter data and prepares the data for wired or wireless transfer to the controller. (Madisetti ¶122.)

- g. a receiving station, said receiving station having a second electrical circuitry including one or more second microprocessors, said receiving station remotely located from said base station;***

*Broniak* discloses this feature by teaching that the “system 8 includes a central controller 10 for managing power consumption and monitoring water consumption within a household.” (Ex. 1004, 2:58-60.) *Broniak* discloses that the “controller 10 includes a micro processor, which is programmed to selectively send and/or receive signals to a device control board 24 and 26 of devices 12 and 14, for example, in response to the input signal it receives.” (*Id.*, 2:60-64.) (Madisetti ¶123.)

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One of ordinary skill in the art would understand from this disclosure that the central controller is located at a distance from the device control boards such that they are accessible by a wired or wireless communication means. (Madisetti ¶123.)

- h. said receiving station having a second power supply, said second power supply is either AC power, DC power, or powered with one or more batteries, said second power supply electrically connected to a second circuitry;***

*Broniak* discloses this feature by teaching that the “controller 10 includes a micro processor, which is programmed to selectively send and/or receive signals to a device control board 24 and 26 of devices 12 and 14, for example, in response to the input signal it receives.” (Ex. 1004, 2:60-64.) *Broniak* also discloses that the “controller 10 further comprises a memory 30 having at least table 32 that collects water consumption data, energy consumption, generation and/or storage data for a home or other structure.” (*Id.*, 5:59-62.) A skilled artisan would understand from this disclosure that the controller has an AC, DC, or battery power supply electrically connected to the microprocessor. (Madisetti ¶125.)

- i. said first electrical circuitry of said base station is in wire or wireless communication with said second electrical circuitry of said receiving station;***

*Broniak* discloses this feature by teaching that the “main water meter 52 is operatively connected to the main water inlet pipe 50 for measuring a total amount of water flow into the home and communicating information gathered to the

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controller 10 via a communication module 56.” (Ex. 1004, 3:52-55; *see also id.*, 5:27-37.) Broniak also teaches that the “flow meter at each pipeline, for example, has a communication module connected that wirelessly or in a wired fashion transmits communication data to the controller.” (*Id.*, 6:47-50.) (Madisetti ¶126.)

- j. said receiving station designed to establish Wi-Fi, Bluetooth or ZigBee electrical communication with a wireless router/server, and/or cellular communication with a cell tower technology, and any combinations thereof;*

Broniak discloses this feature by teaching that “the controller 10 connects via either Ethernet or WiFi to the homeowner’s router and to a client application 34, for example, in a personal computer 36 and/or a mobile device 38.” (Ex. 1004, 4:56-59.) Broniak also discloses that the “controller 10 also has the ability to periodically transmit data to a central server on the Internet 40.” (*Id.*, 4:59-61.) (Madisetti ¶127.)

- k. said receiving station includes mesh-enabled circuitry that can communicate with other receiving stations for transferring water flow, water energy and/or water quality data to one or more access points;*

*Broniak* and *PG&E* render this feature obvious. (Madisetti ¶¶128-130.) *Broniak* discloses that the controller transfers water flow information. (Ex. 1004, 4:56-59.) *PG&E* discloses a meter network that “uses RF mesh technology, which allows meters and other sensing devices to securely route data via nearby meters and relay devices, creating a ‘mesh’ of network coverage.” (Ex. 1006, 1.) *PG&E* also

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teaches that “[e]ach RF mesh-enabled device (meters, relays) is connected to several other mesh-enabled devices, which function as signal repeaters, relaying data to an access point.” (*Id.*) *PG&E* discloses that “[t]he access point aggregates, encrypts, and sends the data back to *PG&E* over a secure commercial third party network.” (*Id.*, 1-2.)

A skilled artisan would understand from this disclosure, in view of the ’792 patent specification, that *PG&E* teaches a receiving station that includes mesh-enabled circuitry that can communicate with other receiving stations. (Madisetti ¶129.) Indeed, all the supporting disclosure regarding mesh-enabled circuitry and access points in the ’792 patent was copied from *PG&E*. (Ex. 1001, 1:46-2:20, 9:40-52, 19:2-15, 43:36-60.)

As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to incorporate the RF mesh technology taught by *PG&E* into the *Broniak* system in order to provide a network that “can span large distances and reliably transmit data over rough or difficult terrain” and “ensure information is passed from its source to its destination as quickly and efficiently as possible.” (Ex. 1006, 2.; Madisetti ¶130.) Accordingly, this feature is rendered obvious. (Madisetti ¶130.)

- l. said receiving station or a custom transfer apparatus functioning as one or more access points for transferring said water flow, water energy and/or water quality data*

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***over an internet connection to one or more remote computers or computer servers; and***

*Broniak* and *PG&E* render this feature obvious. (Madisetti ¶¶131-133.)

*Broniak* discloses that the controller transfers water flow information over the Internet to one or more remote computers or computer servers. (Ex. 1004, 4:56-59, Figure 1.) *PG&E* discloses that “[e]ach RF mesh-enabled device (meters, relays) is connected to several other mesh-enabled devices, which function as signal repeaters, relaying data to an access point.” (*Id.*) *PG&E* discloses that “[t]he access point aggregates, encrypts, and sends the data back to PG&E over a secure commercial third party network.” (*Id.*, 1-2.)

A skilled artisan would understand from this disclosure, in view of the ’792 patent specification, that *PG&E* teaches a receiving station functioning as one or more access points. (Madisetti ¶132.) Indeed, all the supporting disclosure regarding mesh-enabled circuitry and access points in the ’792 patent was copied from *PG&E*. (Ex. 1001, 1:46-2:20, 9:40-52, 19:2-15, 43:36-60.)

As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to incorporate the RF mesh technology taught by *PG&E* into the *Broniak* system in order to provide a network that “can span large distances and reliably transmit data over rough or difficult terrain” and “ensure information is passed from its source to its destination as quickly and efficiently as

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possible.” (Ex. 1006, 2; Madisetti ¶133.) Accordingly, this feature is rendered obvious. (Madisetti ¶133.)

- m. said computer servers allow registered owners and users to access their registered water flow, water energy and/or water quality data using a cell phone, smart phone, mobile phone or a mobile electronic communication device.*

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.3.j. for claim 1, which addresses nearly identical language. (Madisetti ¶134.) The only difference between this feature and that of claim 1 is that whereas claim 1 recites “said remote computers or servers,” claim 2 recites “said computer servers,” which is not a substantive difference for purposes of this Petition. (Madisetti ¶134.)

**3. Claim 4**

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.4. for claim 3, which addresses identical language. (Madisetti ¶135.)

**4. Claim 14**

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.6. for claim 12, which addresses nearly identical language. (Madisetti ¶136.) The only difference between this feature and that of claim 12 is that whereas claim 12 recites “water control means,” claim 14 recites “water shut control means,” which is not a substantive difference for purposes of this Petition. (*Id.*)



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**5. Claim 19**

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.7. for claim 17, which addresses identical language. (Madisetti ¶137.)

**6. Claim 23**

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.5. for claim 5, which addresses identical language. (Madisetti ¶138.)

**7. Claim 27**

*Broniak* discloses this feature for the same reasons explained above in Section VII.B.8. for claim 22, which addresses identical language. (Madisetti ¶139.)

**D. No Secondary Considerations Exist**

“[S]econdary considerations of nonobviousness . . . cannot overcome a strong prima facie case of obviousness.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). Where, as here, the claimed invention represents no more than “the predictable use of prior art elements according to their established functions,” secondary considerations are inadequate to establish non-obviousness as a matter of law. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). As explained in Grounds 1 and 2 above, the prior art renders obvious the challenged claims of the ’792 patent. No secondary indicia of non-obviousness having a nexus to the putative “invention” of the ’792 patent exist that are contrary to that conclusion. Mueller reserves its right to respond to any assertion of secondary indicia of non-obviousness

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advanced by Rein Tech.

**VIII. CONCLUSION**

For the foregoing reasons, Mueller requests that *inter partes* review of the '792 patent be instituted.

This 29th day of October, 2019.

Respectfully submitted,

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### **CERTIFICATE OF COMPLIANCE**

I hereby certify that the foregoing Petition for *Inter Partes* Review complies with the type-volume limitation of 37 C.F.R. § 42.24(a)(1)(i) because it contains 11,779 words, excluding the parts of the Petition exempted by 37 C.F.R. § 42.24(a)(1).

I further certify that the foregoing Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft Word 2016 in 14-point Times New Roman proportional font.

Dated: October 29, 2019

/Coby S. Nixon/  
Coby S. Nixon  
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Attorney for Mueller Systems, LLC

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### **CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 9,749,792 and supporting materials were served on this day by Priority Mail Express (i) at the correspondence address of record for the subject patent and (ii) at the additional addresses below known to the Petitioner as likely to effect service:

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